

## Operational Description

AG220 is an IEEE 802.11a/b/g compliant wireless USB adapter. AG220 plugs into USB port on computer and allows to access wireless network. Also turn AG220 into an access point (AP) using the ZyXEL utility. The AG220 have wireless station mode (infrastructure & Ad-Hoc) and Access Point mode. The AG220 runs from 5 volts, which is provided by the USB port, which interface support USB 2.0. About radio partial: Use an AL7230 radio chip that is transceiver circuit. When transmit that uses a synthesizer to generate the desired carrier from the 40MHz oscillator. Modulates this carrier using the input serial data and then amplifies it for transmission to the antenna via the filter. When receive the signal from the antenna is fed via the filter to a low noise amplifier and then to the receiver. The radio operates from 2412MHz to 2462MHz according to the IEEE 802.11b/g specification. The data rates supported are 1Mbps(DBPSK), 2Mbps(DQPSK), 5.5Mbps(CCK), and 11Mbps(CCK) for 11b and 6,9,12,18,24,36,48,54Mbps OFDM for 11g. The radio operates from 5150MHz to 5320MHz and 5725 to 5825MHz according to the IEEE 802.11a specification. The data rates supported are 6,9,12,18,24,36,48,54Mbps OFDM for 11a. The antenna is PCB Printe antenna without connector.

FCC 15.407(c) states: The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

Data transmission is always initiated by software, which is then passed down through the MAC, through the digital and analog baseband, and finally to the RF chip. Several special packets (ACKs, CTS, PSpoll, etc...) are initiated by the MAC. These are the only ways the digital baseband portion will turn on the RF transmitter, which it then turns off at the end of the packet. Therefore, the transmitter will be on only while one of the aforementioned packets are being transmitted.